

CHAPTER I

DESCRIPTION OF WATERSHED

A. LOCATION

The Upper Grande Ronde watershed, a part of the Grande Ronde River Subbasin, is located on the La Grande Ranger District of the Wallowa-Whitman National Forest. It is located approximately 30 miles southwest of La Grande, Oregon in Union County. The Grande Ronde River Subbasin is part of the larger Snake River Basin, a tributary of the Columbia River basin.

The area being considered in this analysis consists of the Upper Grande Ronde River Watershed (#85). Refer to the UGR River Watershed Assessment, 1994. The watershed has been further subdivided into subwatersheds to facilitate planning, implementation, and evaluation of forest management activities. For acreage totals, see Table 1-1.

Regional and Landscape Analysis

The Watershed Assessment (UGRWA) area encompasses approximately 133,710 acres. National Forest System lands total 116,863 acres. Chapter III identifies existing conditions and provides an analytical framework and integration of the conditions and processes of the ecosystem elements found in the watershed. The UGRWA identifies ecosystem elements out of balance within the analysis area. Chapter IV identifies opportunities to return balance to the area subsequently pursued in this analysis.

One of the primary reasons the Interior Columbia Basin Ecosystem Management Project (ICBEMP) was initiated was to develop management strategies using a comprehensive, "big picture" approach, and disclose interrelated actions and cumulative effects using scientific methods. With completion and release of the Integrated Scientific Assessment and FEIS, new information became available which was considered during the development of this analysis.

The Watershed Analysis area is a part of the Upper Grande Ronde River sub-basin, a part of the larger Grande Ronde River Basin. The preferred alternative in the FEIS for the Interior Columbia Basin Ecosystem Management Project (ICBEMP) identifies this as a High Restoration Priority subbasin for landscape, economic, tribal, and aquatic components.

The intent of landscape restoration is to re-pattern vegetation patches and succession/disturbance regimes and to restore watershed and streams to a condition more consistent with landform, climate, and biological and physical characteristics of the ecosystem. Restored ecosystems would be more resilient to disturbances, more predictable, and would provide the range of habitats needed by aquatic and terrestrial specials. Scarce habitats would be conserved in the short term while expanding these habitats through restoration in the long term.

Landscape restoration also includes Old Forest Habitat as a priority. The intent of restoration for these habitats is to focus on the vegetation cover types and structural stages that have declined substantially in geographic extent from the historical to the current period. Restoration would increase the geographic extent and connectivity of these source habitats and over time provide a framework for well-connected networks of source habitat for terrestrial species.

Aquatic restoration would reestablish watershed functions, processes, and structures, including natural diversity. The intent of management for watershed restoration would be to recognize the variability of natural systems while securing existing habitats that support the strongest populations of wide-ranging aquatic species and the highest native diversity and integrity, extend favorable conditions into adjacent watersheds to create a larger or more contiguous network of suitable and productive habitats, and restore hydrologic processes to ensure favorable water quality conditions for aquatic, riparian, and municipal uses.

The social-economic-tribal restoration component highlights areas where restoration activities directly influence human community, economic, social, and cultural needs. Design and implementation of restoration activities should promote workforce participation, serve demands for commodity production at various levels, encourage intergovernmental collaboration, and consider tribal needs and interests.

Watershed Level Analysis

The UGRWA area has been subdivided into twelve subwatersheds (for more details on defining landmarks for these subwatersheds, see Chapter 1, pages 1-3 of the UGGRWA 1994):

Grande Ronde River sub watershed (85A)
Lower Fly Creek sub watershed (85B)
Lower Fly Creek sub watershed (85C).
Upper Fly Creek sub watershed (85D)
Grande Ronde River sub watershed (85E)
Lower Sheep Creek sub watershed (85F)
Chicken-Dry Creeks sub watershed (85G)
Upper Sheep Creek sub watershed (85H)
Grande Ronde River sub watershed (85I)
Limber Jim Creek sub watershed (85J)
Clear Creek sub watershed (85K)
Grande Ronde River sub watershed (85L)

Insert Project area map here

Insert Sub watershed Map here.

Table 1-1: Upper Grande Ronde Sub watershed Acreages

Sub watershed Name	Number	FS Acres	Total Acres
Grande Ronde River Mile 180	17060104-85A	3285	6910
Lower Fly Creek	17060104-85B	8939	9773
Little Fly Creek	17060104-85C	10575	11982
Upper Fly Creek	17060104-85D	10321	11636
Grande Ronde River Mile 194	17060104-85E	13812	14711
Lower Sheep Creek	17060104-85F	5499	9109
Chicken-Dry Creeks	17060104-85G	12066	14442
Upper Sheep Creek	17060104-85H	12341	12341
Grande Ronde River	17060104-85I	5825	8548
Limber Jim Creek	17060104-85J	11948	12026
Clear Creek	17060104-85K	6987	6987
Grande Ronde River Mile 203	17060104-85L	15265	15265
TOTAL		116863	133710

B. CLIMATE

The Grande Ronde River drainage is located in Northeastern Oregon. It is characterized by a marine climate, which is slightly modified as it moves up the Columbia River Basin. The area experiences a relatively cool, moist climate with a short growing season and little or no summer precipitation. Annual precipitation averages 20 inches per year and ranges from 15-30 inches, much of it falling as winter snow. Temperatures range from an average summer high of 80 degrees F to an average winter low of 17 degrees F. Summer temperatures fluctuate widely with hot days and cold nights. Portions of the drainage are located within summer lightning corridors and may experience localized brief, torrential rain events. At higher elevations, frost can occur almost any night of the year. Winter temperatures remain low for long periods with considerable snow accumulation.

C. GEOLOGY

The UGRR drainage is within the Blue Mountain sub province of the Columbia River Plateau physiographic province. This sub province is characterized by broad rolling upland surfaces to the north and complex mountains and dissected volcanic plateaus to the south. There are a variety of rock types in the Upper Grande Ronde area, each with different weathering and erosion characteristics. The dominant rock type is Columbia River Basalt. This basalt flowed through fissures and dikes, flooding the area with many pulses forming a thick sequence of basalt. Other important rock types of the region include granitic rocks, Tertiary tuffs and tuffaceous sediments, quaternary alluvium and fanglomerate material found in the valleys, (Walker 1973).

D. TOPOGRAPHY

The drainage is composed of approximately 55 percent moderately steep to steep mountainous terrain (30 percent slope and above), approximately 20 percent moderately rolling terrain between the valley floor and the uplands, and approximately five percent of the terrain is relatively flat floodplains. Elevations within the drainage range from approximately 3,400 feet at the mouth of Upper Grande Ronde to 7,800 feet in the southeast corner below Anthony Lake.

E. TERRESTRIAL ENVIRONMENT

Vegetation:

The drainage contains a variety of vegetation types, with about one half of the coniferous forest on NFS land belonging to the grand fir series. Lodgepole pine, Douglas-fir, sub-alpine fir and ponderosa pine plant associations and community types make up the remainder of the forest area on public lands. Shrubland vegetation, grasslands, meadows and riparian communities add to the botanical and habitat diversity.

The plant associations for forested, non-forested and riparian areas are discussed in Chapter III of this document.

Soils:

Soils within the drainage developed over a variety of bedrock types. Most soils have a surface layer of volcanic ash, which was deposited as a result of eruptions, including Mt. Mazama (site of Crater lake). Ash surface soils are deposited over or mixed with residual bedrock derived soils. Surface soils are predominately fine to medium textured due to the presence of the ash while subsoil's range from very fine to coarse textured, depending on bedrock type.

Wildlife:

Several Proposed, Endangered, Threatened, and Sensitive (PETS) wildlife species and their habitat have been documented in the drainage. Refer to Chapter III for a complete list of the species documented in the project area.

The wildlife management indicator species for the Wallowa-Whitman National Forest (Rocky Mountain elk, pileated woodpecker, pine marten, northern goshawk, and primary cavity excavators) occur across all or much of the Upper Grande Ronde drainage. The UGRR drainage comprises a portion of the Oregon Department of Fish and Wildlife (ODFW) Starkey Big Game Management Unit.

F. AQUATIC ENVIRONMENT

On August 18, 1994, the National Marine Fisheries Service (NMFS) officially listed the Snake River spring/summer Chinook salmon (*Oncorhynchus tshawytscha*) as an Endangered species under the Endangered Species Act. This August 1994 listing includes the spring Chinook salmon found in the Grande Ronde River Subbasin on the La Grande Ranger District (LAG RD). Fall Chinook salmon do not currently utilize habitat on the LAG RD, nor did they historically.

The Regional Forester for Region 6 of the Forest Service has added all wild and naturally producing anadromous fish occurring with Region 6 to the Regional Forester's Sensitive Species List. This includes Grande Ronde River Subbasin summer steelhead and spring Chinook salmon. Bull trout and redband trout are also listed as sensitive species by the Regional Forester in Region 6 and are present within the UGRR Drainage.

G. PEOPLE

The Confederated Tribes of the Umatilla Indian Reservation (CTUIR) have reserved treaty rights to harvest fish, wildlife and plants at usual and accustomed places on lands ceded to the U.S. Government in the Treaty of 1855. In this case, the CTUIR reserved fishing and other rights to the Upper Grande Ronde River.

H. HUMAN USES

Consumptive uses:

Special Forest Products (SFP) are groups of raw material harvested for use as ornamentals, in landscaping, or by manufacturing into a wide variety of final consumer products including food and pharmaceuticals. Local interest has focused mostly on mushrooms, berries, fuel wood, post, poles, and other wood products. District-wide during the 2000 season there were 243 commercial mushroom harvesting permits issued, permits for 3,277 cords of personal firewood, 1,234 cords of commercial firewood permits, and 443 Christmas tree permits.

Timber Harvest:

A large proportion of the NFS land in the drainage is allocated to the production of timber. Approximately 50 percent of the forested acres have had trees harvested in the last 30 years on the La Grande Ranger District. On private land, approximately 90 percent of the forested acres have received some timber harvest in the last 30 years (Rick Wagner, ODF, La Grande, OR pers. comm. 1993). These harvests were primarily in response to salvage of insect caused mortality into the early 90's.

Water Diversions:

There are currently no known water diversions in the drainage. Water diversions were utilized in the 1800's and early 1900's for mining, but these diversions are no longer active. There is no permitted water use allocated for irrigation in the drainage (Rick Lusk, Union county Water Master, Pers. Comm. 1993).

Fishing:

Recreational fishing for residential salmonids is common in the UGRR drainage as a whole in the summer months. The majority of the targeted fish are summer steelhead and hatchery rainbow trout.

Hunting:

The drainage is heavily utilized for hunting during the fall. Most of the use is associated with big-game hunting (elk and deer), which accounts for 11,000 recreation visitor days per year.

Mining:

Mineral exploration within the drainage has been very limited over the last 150 years. Currently there are no valid mining claims or Operating Plans in the area.

Grazing:

Initially, there were xxxx allotments established for this watershed. Several of these allotments were once grazed by livestock, including horses, from the Umatilla Reservation. Livestock grazing was allowed at an approximate level of xxxx Animal Unit Months (AUM's) during 2000 on x allotments on NFS lands within the watershed. Cattle grazing now accounts for xx percent of the total livestock grazing level (based on AUM's) with sheep grazing accounting for xx percent.

Transportation/Travel/Passage Routes:

The transportation system in the Upper Grande Ronde area began as roads, rather than trails, in the mid 1800's. By 1885, 114 miles existed. Road or railroad development continued slowly until about the 1950's. Most early development was located in draw bottoms where logs could be skidded down hill and road construction was easier than on hillsides. The need for more roads increased with demand for more Forest Products. Currently the drainage and all of its tributaries are roaded right up to their headwalls. There are approximately xxx miles of open and closed roads on National Forest land located in watershed 85 and about xxx miles of road on non-Wallowa-Whitman National Forest land within watershed 85.

Logging technology had the greatest influence on road location and road densities. Horse and tractor logging required logs to be skidded down hill. Short reach cable systems required roads to be built about 600 feet apart along the hillside and logs yarded up hill. Long reach systems capable of yarding up to 3000 feet required roads to be built near ridge tops. Until recently, roads and related structures were built but not obliterated when replaced by other roads. Many times this resulted in a drawbottom road, a hillside road and yet another road along the ridge top to access the same piece of ground. Mother nature was left to do road management and rehabilitation.

Special Uses:**Non-consumptive uses:****Recreation use.**

Non-consumptive recreation uses in the area include camping, hiking, scenic driving, snowmobiling, mountain biking and all terrain vehicle (ATV) riding. Camping is primarily associated with the dispersed sites within the project area as no developed sites currently exist. Approximately 70 percent of the recreation use within the area is classified as day use only. There are designated motorized vehicle trails and hiking trails in the drainage.

I. VALUES

Non-consumptive values:

Visual Quality:

Upper Grande Ronde Watershed is managed primarily for Roded Modified ROS opportunities; the remainder of the watershed is managed for Roded Natural. Visual corridors along Road 51, and the viewshed from xxxxx should be managed for a Roded Natural recreation setting.

Wildlife habitat:

The drainage contains a variety of habitat types, including substantial amounts of meadow, grassland/scabland, and riparian habitat. The majority of the watershed is coniferous forest, with grand fir and lodgepole pine plant associations comprising most of the watershed. Douglas-fir, subalpine fir, and ponderosa pine plant associations make up the remainder of the conifer forest types.

Vegetation habitat:

The flora of the drainage is characterized by plant species typically found in the Blue Mountains and contains nearly all elements of the native vegetation that are indigenous to the area (Strickler, 1980). Some species, more commonly found in the Great Basin are also present. Approximately 800 plant species have been identified and documented for this area, including five species from the (1991) Region-6 U.S. Forest Service Sensitive Plant List. (See Chapter III for more information regarding Threatened, Endangered and Sensitive (PETS) plant species.)

Cultural/Historical.

The early accounts of the Grande Ronde River Subbasin provide a picture of an area rich in fish and wildlife. Native Americans utilized the resources for thousands of years prior to the arrival of pioneer settlers.